

1. (Amended) A charge transfer semiconductor device [including a crystalline semiconductor film having rod-like or columnar crystals extending in a predetermined direction, said device] comprising:

a crystalline semiconductor film having a plurality of crystals extending in a crystal growth direction;

a charge storing means including a plurality of photodetecting elements, each of said photodetecting elements being for storing a charge in accordance with an incident light; and

a charge transfer means for transferring said charge stored in said charge [stored] storing means,

wherein [said predetermined] the crystal growth direction coincides [or approximately coincides] with a charge transfer direction of the charge transfer means.

2. (Amended) A [charge transfer] semiconductor device [including a crystalline semiconductor film having rod-like or columnar crystals extending in a predetermined direction, said device] comprising:

a plurality of photodiodes being formed in a matrix on an insulating surface;

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connected
a plurality of vertical charge coupled devices on the
insulating surface, said vertical charge coupled devices being
connected with the plurality of photodiodes;

at least a horizontal charge coupled device on the
insulating surface, said horizontal charge coupled device being
connected with the vertical charge coupled device,

wherein each of the vertical and horizontal charge coupled
devices comprises a crystalline semiconductor film having a
plurality of crystals extending in a crystal growth direction,

wherein [said predetermined] the crystal growth direction
coincides [or approximately coincides] with a charge transfer
direction of each of the vertical and horizontal charge coupled
devices.

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5. (Amended) A device according to claim 1 further
comprising an active matrix display device being integrated with
said charge transfer means [on the] over a same substrate.

6. (Amended) A device according to claim 2 further
comprising an active matrix display device being integrated with
said vertical and horizontal charge coupled devices [on the]
over a same substrate.

7. (Amended). A method of manufacturing a charge transfer semiconductor device, [including a crystalline semiconductor film having rod-like or columnar crystals extending in a predetermined direction,] said method comprising the steps of:

forming an amorphous semiconductor film on an insulating surface;

selectively introducing a metal element for promoting crystallization of said semiconductor in contact with a [predetermined region] portion of said amorphous semiconductor film;

heating the amorphous semiconductor film so that [to grow crystals] a plurality of crystals grow in a crystal growth direction parallel with said insulating surface from [said predetermined] the portion [whereby said] to form a crystalline semiconductor film [is formed];

heating said crystalline semiconductor film in an oxidizing atmosphere including a halogen element to form a thermal oxidation film on a surface of the semiconductor film;

removing said thermal oxidation film; and

forming at least a charge coupled device for transferring a charge in a charge transfer direction that coincides [or approximately coincides] with [said predetermined] the crystal growth direction.